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Correspondence from practical farmers, giving the results of their experience, is solicited. Letters should be signed with the writer's real name, in full, which will be printed or not, as the writer may wish.

The PLOUGHMAN offers great advantages to advertisers. Its circulation is large and among the most active and intelligent portion of the community. Entered as second-class mail matter.

Farmers' "Don'ts."

Don't think because you happen to be a farmer that you or your children do not need an education. This is a mistake. Reading is the farmer's recreation, and there is no class of labor that requires more study, more brain work or more thorough application than farming.

Don't fail to take at least one or two good agricultural papers—read them carefully, and when you find out some better way than the one you are pursuing, don't fail to get out of the old rut and try the new path.

To those who write for the agricultural papers let me say, don't go too much on theory. Don't state a thing for a fact, until by actual experience you have found it to be such. Then when you have discovered a really good thing, don't fail to let the public know it.

Don't forget to be public-spirited. Remember that you are in a measure responsible for the good standing and good appearance of your town; and if a public library is proposed, don't hold back and say, "I will not give anything because I have no time to read," or if an appropriation is asked for the permanent improvement of the highways in your town, don't say, "I will not vote for it unless it is to be laid out where it will particularly benefit me." This is pure selfishness. Your children and others will be benefited by the library and the public generally by the improved highways, and you have no right to ignore the demands of either.

When you sell your neighbor anything don't try to get more from him than the article is worth, and when you purchase anything from him don't let him know that you are doing so, for this is not doing as you would be done by, and you don't want to go back on the "Golden Rule."

In your dealings with your fellow-men don't always be quoting the saying, "I must be just to myself," for the man who does this generally forgets to be "just" to the other fellow.

Don't think you have no place in politics. Your town council has a claim on you, and if you do not help run your town, State and government, you may depend upon it, others less worthy and competent will. And you don't want to "kick" at political measures you might have prevented had you had a hand in them.

Don't be continually "nagging" those about you with criticisms of everything they do or say. Such conduct will never gain you friends. If sickness comes upon you, if crops fail, or your horse or cow takes a notion to die, don't despair, but remember the example of patient Job and look forward to brighter days. And if, as is sometimes the case, those who should comfort you and sympathize with you misinform you that it is all owing to your own management, or lack of judgment, and they should have thought you would have known better, and with similar comforting remarks, don't take it too much to heart, but just let the ungenerous conduct pass for what it is worth.

Don't sneer at the church and church-goers just because you do not happen to be a "meeting man" yourself; or be constantly trying to pick flaws in their religion. Remember that the best of men are wicked enough, and if they are trying to live a better life, they are certainly worthy of your respect, and your property is made more valuable by the church in your community—although you may not realize it, it is a fact, and "don't you forget it."

If you are a young man and have proposed to a girl and been rejected, don't go and throw yourself into the deep flowing river (unless you can swim), and don't go and hang yourself with a rope; the rope is worth more for other purposes, and there are plenty of girls left, so brace up and don't show the white feather. If you have proposed and been accepted, don't for a moment think the girl you are going to marry is an angel. If you do, ten chances to one you will be greatly disappointed; the stern realities of life will be far more likely to develop temper than wings—then don't expect too much of each other, but remember that you are both human, and liable to err in act and judgment. Don't speak slightly of your mother-in-law (it is not always safe) and there are some excellent mothers-in-law, and yours may be one of them.

Don't keep several worthless dogs, and then apply to the town to have your taxes abated.

Don't think you are better than any one else, or base your estimation of their character and worth by your own line of conduct. You know that the Pharisee had

something of this idea, but the Publican came in ahead after all.

Don't stone your neighbor's hens, unless you wish to make a life-long enemy of him. It is far better to move your garden away from the hens.

Don't go to law unless you are obliged to. The man who is constantly prosecuting somebody for real or imaginary injuries is generally of a quarrelsome disposition, and always out of pocket.

Don't carry other people's money in your pocket, or, in other words, don't let a debt run when you have the money to pay it. If a person is accommodating enough to trust you, you should be gentleman enough to pay him as soon as possible, but don't run in debt if you can help it.

If you are caught in a tight place don't lie out of it; this is like sneaking out at the back door. If you are caught in a fault own up like a man, and endeavor to do better in the future.

You see, reader, that the family of Don'ts is a numerous one. I have not mentioned half of them yet, but have written enough for this article. Perhaps you can make yourself acquainted with other members of the family.

J. P. L.

A Suburban Jersey Dairy.

Just on the edge of the Boston suburban district, in the town of Lincoln, is located "Jaynes Farm" for the production of high-class milk, cream and poultry products. The farm is a source of more or less profit, but is doubtless chiefly valued by the owner, Mr. C. P. Jaynes, as a source of relaxation from the active business cares of the city. To one who loves beautiful cattle, good horses and fine poultry, and who enjoys attractive scenery and surroundings combined with a productive, thrifty farm, the establishment must prove very satisfying. It is just such an enterprise as the average city man is ever planning for the future, but which hesitates to get into practical form.

THE DAIRY HERD
numbers about fifty, including twenty young stock. Of the cows about one-half are registered in the official Jersey herd book as pure bred; the others are Jersey grades of high quality. Most of the youngsters are pure bred, thus insuring a steady replacement of the grade cows with registered animals. The five-year-old H. F. Pogue 24th is head of the herd. This animal is a superb specimen of the breed. He is sired by Hood Farm Pogue, which is descended in the second generation from Oonan (record, 32 pounds 24 ounces of butter in one week), and the third generation from Ida of St. Lambert (record 30 pounds 24 ounces of butter in one week). The dam of H. F. Pogue 24th was Sophie 4th of E. F., a grand cow, with large, well-shaped udder and long, well-placed teats (record 14 pounds 17 ounces of butter in one week). She was by Sophie's Tormentor, out of Gypsy of Avon, and her granddaughters were Tormentor Imp. and Prince of Avon.

One of the finest of the cows is Maquilla's Violet, seemingly a well-bred perfect animal, showing quality and high breeding in every line and curve. The picture on the first page shows Maquilla's Violet with her calf led out to be photographed in charge of Supt. C. G. Clapp. The quality of the cow appears at first glance. Her square, well-placed udder suggests her splendid milking powers. As a two-year old she gave during May of last year 1336 pounds, certainly a phenomenal record for a young Jersey heifer fed only a moderate ration, with no attempt to force results at cost of future usefulness. At time of this record she was 3 years 8 months old. It is not often that beauty and utility are so attractively united.

MAQUILLA'S VIOLET.

This cow, Maquilla's Violet No. 177404, was born Aug. 27, 1903, sired by Fairview Prince who was by Meridale Victor Hugo. Meridale Victor Hugo goes back to Stoke Pogis and Ida of St. Lambert, and his dam, Maggy Sheldon, goes back to St. Lambert stock. Maquilla's Violet was from Maquilla's Violet 2d, by Hysoloth Pogue Harry, out of Maquilla's Violet 69774. Hysoloth Pogue Harry, through Hysoloth Harry, goes back to Ida Stoke Pogis and Kitty Better. Maquilla's Violet 69774 was sired by Maquilla's Harry. The present Maquilla's Violet is considerably inbred to St. Lambert and Stoke Pogis stocks, as well as other noted Jersey families, thus accounting for her possession of so many excellent qualities of the breed. She is perhaps the best of the herd, as considered, but there are others following close in quality and record.

THE QUALITY OF THE YOUNG STOCK, which is kept in large box stalls, or pens, in the basement, suggests well for the future of the herd. It is planned to largely increase the income later by the sale of calves. At this stage, when rapid increase is the main point, no pure-bred heifer calves are sold. Not long ago the writer visited a prominent breeder of Holsteins whose main grievance seemed to be the fact that about nine out of ten calves of his herd were males. Although his stock was of the very best, there was, of course, considerable difficulty to get rid of so many high-priced bull calves. In the Jaynes herd the opposite condition rules, with nearly nine-tenths of the calves heifers, a most desirable state of things for building up a herd. There are great possibilities for the breeder who can work out the mass which must underlie such a persistent run of luck in these respective herds. Probably the breed has nothing to do with the difference, but rather the strain and the individuality, possibly also the conditions and care.

The herd is a model arrangement for a suburban dairy, and is well-lighted, airy,

roomy, cow floor, with convenient feeding and watering facilities. No manure is stored in the cellar, but is thrown into a cart below the floor and carried off daily to a large open shed in the field, thus doing away with bad odors and the fly nuisance on the premises.

SPECIAL FEEDS.

Ensilage is the mainstay of the winter ration, the average feed being about one bushel a day, with nine pounds of mixed grain and a moderate amount of hay. A favorite grain feed is "Bibby's cake." It is an imported article costing about \$20 per ton delivered. It appears to be a by-product after the extraction of oil from various seeds, somewhat resembling linseed cake in its lumpy nature. It is readily eaten by the

rich looking brown egg of fairly uniform size and well suited for the seeds fountain trade. Large numbers of chickens are raised to maintain the laying stock and for broilers. About one thousand chickens are in the brooders and the number will be increased to three thousand. The brooder houses as a whole is heated with hot water, and the houses also overlaid with hot water pipes, according to the Cyphers system.

The laying hens are housed on the continuous plan, a series of apartments under a long roof, with an alley at the rear the whole length for the attendant. One of the long houses is much more substantially built than the other, and has a tight, warm room in each compartment separate from the day room. But the cheaper

cows were not doing quite as well as usual this spring for some reason. In my opinion this is largely due to the poorer quality of the hay.

Notwithstanding at one time it looked as if the egg business had gone to pieces after a profitable winter trade, later developments seem to indicate that it will still be safe to keep right along and that the business will soon be right side up again.

Seedling time is at hand again and farmers should make the most of their opportunities. As a general thing, when the land is in suitable condition, warm and dry, the early sown grain does the best. There may not be quite so large a growth of straw but it will stand up and fill better, and where the land is seeded to grass with the crop, a good catch is more likely to be had than with late sowing.

No farmer with suitable land should neglect to sow liberally of the clovers, whose kinds best suited to soil and location, if he is a dairyman especially. In my part of the State the common red and white are used. The last is more hardy than the first, but both together make a good mixture. A little experience this spring shows the value of clover hay over timothy for milk. Farmers should raise plenty of it and then put the hay where it can be had when wanted by the cows.

Farmers should plan to raise large crops of corn for fodder, so in case there should be a light crop of hay there will be this most excellent substitute to fall back upon. Franklin County, Vt. E. E. TOWLE.

Notes from Washington, D. C.

APPEARANCE OF THE CICADA.

According to Entomologist Mariast of the Department of Agriculture, two broods of the periodical cicada will reappear this year, one an important and widely distributed seventeen-year brood and the other an unimportant, small and scattering thirteen-year brood.

The seventeen-year brood may be expected in the States of Massachusetts, New York (Long Island), Pennsylvania, New Jersey, Maryland, District of Columbia, Northern Virginia, West Virginia, North Carolina, South Carolina, Georgia, Tennessee, Kentucky, Ohio, Indiana and Illinois. This brood has peculiar interest, inasmuch as it is the one which was first noted or recorded in literature at least by the early European scientists as this continent. The British Naturalist in his peculiar interest is that given in the work entitled "New England's Memorial," by Nathaniel Morison, printed at Cambridge, Mass., in 1699. An article on the "Locust of North America," published in the Barton Medical and Physical Journal of 1804, is referred to in an editorial as follows: "Speaking of a sickness which, in 1699, carried off many of the whites and Indians, in and near Plymouth, in Massachusetts, he says: 'It is to be observed that the Spring before this sickness, there was a numerous company of flies, which were like for bigness unto Wasps or Bumble-Bees, they came out of little holes in the ground, and did eat up the green things, and made such a constant yelling noise as made all the woods ring of them, and ready to deaf the hearers; they were not any of them heard or seen by the English in the Country before this time. But the Indians told them that sickness would follow, and so it did, very hot in the months of June, July and August of that Summer,' viz. 1698. He says, 'Toward Winter the sickness ceased,' and that it was 'a kind of a pestilential fever.'"

The thirteen-year locust will appear in Alabama, Georgia, North Carolina and Tennessee. The periodical cicada is so well known that a general account of it in this place is unnecessary. When it appears in great numbers it naturally causes considerable alarm and arouses fears for the safety of stunted trees and orchards. The actual damage, however, is usually slight, except in the case of newly planted orchards, and even here, by rigorous pruning back after the cicada has disappeared, much of the injury caused by the egg punctures can be obviated. As a matter of precaution, however, it might be well not to locate new orchards this spring in recently cleared ground or in proximity to woods in any of the regions where the cicada is here recorded. In many cases, however, the clearing up and cultivation of the ground will have destroyed the larvae of the cicada, and it may not appear.

The exact date of emergence of the adult cicada from the ground will vary somewhat with the season. The experience of many years, however, indicates that most of the individuals will come out during the last week in May. Very frequently the holes through which the cicadas will emerge will appear in the soil some weeks before the insects actually come out. These holes are a little larger around than a lead pencil, and are frequently so numerous as to absolutely cover the surface of the ground.

HUNTING FOR A DINNER.

The biological survey of the Department of Agriculture is on the still hunt for a dinner. In order to do this, the department would gladly receive a contribution of a family sick, meat or rabbit, for it is working hard now to get a family contemptible meal among rabbits. It is well known, of course, that the gopher problem is a serious one in many parts of the West, and the rabbit pest has at times threatened to dominate America. Although the small animals do a great amount of damage, but most people do not realize how great the damage of this pest is. Let it be the country of the State of Washington, last year field mice did damage estimated at half a million dollars, while the damage from field mice, sold mice, and other pests, was estimated at \$1,000,000.



FARM BUILDINGS OF JAYNES FARM AT LINCOLN.

cows, in fact, they appear very fond of it. Besides being a good milk maker, it is thought to impart a glossy appearance to the hair, while its laxative qualities help to regulate the general health. The regular mixture is two hundred pounds wheat feed, one hundred pounds oat feed, one hundred pounds gluten feed. Each cow gets four pounds of the mixture, also four to five pounds Bibby cake, a basket of ensilage and about six pounds of hay.

Of course not all the food for so many cows, besides several horses, can be raised on a thirty-acre farm of which only nine-tenths are tillage land. The grain is bought outside and a part of the hay.

The land is devoted to large crops for summer feeding and to corn for milking, of which about one-third is sold to the city. The rest is fed to the cows. The corn is raised on a small scale. Probably this

house has been found to give quite as good results. In this house the scratching and rooting rooms are side by side and both well lighted. One of these houses is 100 feet in length and the other 125 feet. There are also four colony houses. The yards joined with each compartment of the main house are 200 feet. Connecting with each compartment is a second and larger yard, which is covered at intervals with green crops, to which the hens are admitted when the growth is large enough to afford pasturage. The hens are fed with dry ground silage in large automatic hoppers, a labor-saving plan which seems to give satisfactory results. The grain rations consist of ground corn, oats, wheat, barley and clover hay, with best sorghum, about two pounds of each, and about half a pound of linseed cake.



HERD OF THE SUBURBAN DAIRY FARM.

plan makes the utmost of the farm's practical dairy capacity, the land being well suited for corn, oats and peas, rye, Hungarian, etc., and producing heavy yields. The main difficulty will be to secure enough of a rotation to keep the soil in the right condition for heavy production. The large amount of manure available will do much to offset the lack of soil to plow under, and perhaps with clover, vetch and rye sown in the cornfields in late summer there may be sufficient to keep the soil mellow, light and retentive of moisture.

MILK FOR BODA FOUNTAINS.
The milk is handled in the most careful manner. The cows are kept clean, the milk thoroughly strained, aerated, mixed and cooled. It is shipped in forty-quart cans protected from heat or cold by felt jackets.

Northern Vermont Farm Notes.
Farmers will be anxious to find in what condition the meadows have passed through such a kind of winter. Frequent thawing and freezing with little snow to cover the fields is bad for grass. On this account more rain is now needed. It is to be hoped that the grass on the newly seeded fields, especially the clover, has not been killed out.

The sugar season is over and the cane is being put away. It commenced late and lasted only a short time. Results variable, hardly up to the average in quantity, but excellent in quality.

Priores for butter were well maintained for a long time, but a week ago went down several cents a pound. It is possible the drop has been too great, as is often the case under similar conditions, but if so an equilibrium will be reached later on. The creameries are in active operation, and there is again a good number of them in Franklin County. The last of the separator stations, I think, have been closed. At the creameries what milk is brought in by nearby farmers is separated, otherwise this work is now done on the farm, and the creameries employ teams to collect it. Farmers like this plan much better than the old one of carrying the milk to the creamery. With so much competition of them it is likely to be among the creameries for pasture, farmers are likely to get all that the creameries can afford to pay, and pasturemen are likely to be disappointed.

THE POULTRY department has been in bounding and the farm enterprise. The laying stock includes over five hundred hens, all purchased White Plymouth Rocks. These lay a

The milk is all used by the various Jaynes stores in Boston, for which a product of highest grade is needed for the various drinks served at the soda fountains. In fact, the supply of the farm is not sufficient, and more Jersey milk is bought from the Lawson farm and elsewhere. All the milk has a high butter test and sets a thick cream. The milk shipped in from the farm is credited to the farm at the price paid for the milk from outside sources, and the net results of the farm operations show a balance on the profit side.

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They have been some complaints that the

poultry.

Starting a Flock for Eggs.

Hardly a poultry or farm paper puts out an issue, but one sees this question, "I am going to start poultry keeping, which breed is the greatest egg producer?"

Farmers, as a class, read too little regarding their business, consequently when they are told of a heavy laying flock of any breed of fowls, they take it for granted that all that it is necessary for them to do is to get some hens of the particular breed in question, no matter how cheaply, and take them home and feed them, in order to get the same good results as the particular flock in mind, which may have been bred very carefully for prolific egg production for years. Here is where they "fall down."

In any flock, of any breed, there are some superior and some inferior layers. To establish a strain of heavy layers is not the work of a season or two, but ten seasons should show marked results in progeny in the desired direction.

Farmers should remember that the strain and not the breed is the point to keep in mind in poultry breeding, as well as in breeding for high testing cows. In the latter case, we would not expect to raise a cow testing five per cent. fat from a dam testing three per cent., at least not the first time, but by breeding her progeny to a sire of a rich milking strain the desired results would in time be accomplished.

The proper course to pursue in the selection of a breed of fowls is to adopt a breed that is pleasing, for you will then take pride in your flock, and it will be a pleasure to give them the necessary care to insure success. After the breed is selected, then watch for the best layers and put them into your breeding pen, and mate with a good male purchased from a breeder who can vouch for the fact that the bird comes from a prolific laying strain. Next year mate a cockerel of your own raising with the yearling hens used this year. Be sure he is vigorous. This will intensify the egg producing qualities. Introduce new blood when you can get a male you know is bred along the line you are working. Give up the idea that the "breed" has anything to do with it, and learn to select the best layers, and males from the best layers, and you will see a steady improvement each year.

Leghorns are held up as a measure for the prolificacy of all other breeds, but there are Plymouth Rocks, Wyandottes, and many more from which, by careful selection, strains have been produced that will compare favorably with any of the smaller breeds that are so-called egg machines. A good many farmers think a cross-bred fowl is the only right thing. Don't be mistaken. A first cross may do well, but where are you then? Continuous crossing results in all sizes and colors. The chicks from such stock develop unevenly, and come to laying maturity at different periods, and there is no pleasure in the care of them. It costs as much to feed them as it does to feed a flock of pure bloods. Another advantage in the fall blood, broody fowls you can sell eggs for hatching and breeding stock at a good price, if you will breed to standard requirements. Do not be afraid to put a few dollars into a trio or pen to start your flock. It is much cheaper than buying eggs, and the price realized for the birds after you are through with them goes quite a way in off-setting the first cost. Buying eggs for hatching, even when the shipper is honest, as I believe most of them are, very often results in disappointment from poor hatching, or the stock does not turn out as good as expected. My experience teaches to start with a trio, if that is all one can afford, rather than buy eggs.

Vermont.

Remedies for Hen Lice.

Given half a show, it is seldom that poultry will succumb to the ravages of vermin. Hence, the importance of the poultryman always doing his part. Among other things, he should certainly be generous enough to provide them with an up-to-date dust bath. This means that it should consist of dry earth which has been sprinkled with diluted carbolic acid. This acid is too much for even the most bloodthirsty lice to endure, and thus used in biddy's bath it will soon cause them to seek new fields of operation, or die.

To be still further on the safe side, however, it is advisable to add an ounce of carbolic acid to a pailful of whitewash and, while hot, dash it, with a brush, into every crack and spread it over every spot in the henhouse. This is sufficient to kill all sorts of vermin and, with the dust bath, makes life decidedly more pleasant to the fowls.

Nevertheless, if there are setting hens at intervals, and the same applies to chickens, for they do not have as good a chance to assist themselves against lice as other poultry. If found to be infested, dust them with some insect powder two or three times a week apart. This will destroy all the lice it comes in contact with, but not the "nits" or eggs which, subsequently will hatch out more lice. Don't neglect, therefore, to make a second application of powder a week after the first one, and then, in turn, a third one.

To apply the powder, take the bird by the legs with the left hand, letting her head hang down. By so doing, the feathers will all open up, whereupon a teaspoonful or two of the powder may readily be dusted among them and rubbed in close to the skin with the fingers. Every part of the fowl, remember, should be reached; around the vent, between the thighs, under the wings and about the neck, wherever there is the least chance for the lice to congregate. Also sprinkle some into the nests at hatching time, and if you have any suspicion that, despite all your efforts, the chicks are infested, grease them with warm lard on a warm day. Do not use much—just a little on the head and neck and under the wings and around the vent of each chick, repeating it in a fortnight. Dust them and their nest, at the same time, liberally with insect powder.

Milford, N. Y.

FRED. O. SIDLEY.

Growing Ducklings.

With a view to securing the relative to the cost of raising ducks, five newly hatched Pekin ducks at the Utah Station were fed for nine weeks a mixture of ground grains and skim milk in the form of a mash, with corn, rolled oats and linseed meal, in varying proportions. At the close of the period the ducks had made a total gain of 37.3 pounds. Each pound of grain required 3.02 pounds of mash, a like amount of skim milk, and 0.16 pounds meat scrap, the cost being 3.30 cents.

At the close of the period two of the ducks were fed for five weeks longer and gained only 0.8 of a pound. The food required per pound of gain was 22.5 pounds of grain, a like

amount of skim milk, and a pound of out bone, very much larger amounts than during the first period.

It is the practice of the large producers to market the ducks at about the age of ten weeks. The market demands young ducks. At this age they bring the best price to the producer. If kept longer they begin to grow new feathers, and the food they eat is largely used in the making of feathers. Further growth is checked, and to feed them beyond this period is unprofitable.

Dorticultural.

Simple Vine Grafting.

I have often wondered why more vine grafting is not done by farmers. It is the quickest way to get a supply of choice kinds of fruit and any wild vine or seedling that comes up by the wall will do the work. The process is not harder than grafting the limb of a tree.

Dig away the soil about the stump of the vine and cut off fully an inch below the surface. Trim and smooth the cut with a sharp knife. The cleft as shown in the



VINE GRAFT.

drawing at a is made with a grafting chisel or special knife. Do not split clear through the stock, but only at one side. One section to a vine is best. Cut the section to include one to three buds and whittle it wedge-shaped as for tree grafting, except that one of the bevels should be more slanting than the other, so as to avoid cutting into the pith on both sides, having the wood continuous to the point. Insert the section so that the inner green bark comes into contact at the edges. This is the main essential of success, as with all grafting. Remove the chisel and replace the earth. No wax is needed. In case the stock is a small one the graft may be increased by winding with stout twine once or twice around very close to the top.—J. A. L., Middlesex County, Ct.

Thoroughness Makes the Garden.

While on land newly devoted to market gardening the owner will then take pride in the garden, and it will be a pleasure to give them the necessary care to insure success. After the breed is selected, then watch for the best layers and put them into your breeding pen, and mate with a good male purchased from a breeder who can vouch for the fact that the bird comes from a prolific laying strain. Next year mate a cockerel of your own raising with the yearling hens used this year. Be sure he is vigorous. This will intensify the egg producing qualities. Introduce new blood when you can get a male you know is bred along the line you are working. Give up the idea that the "breed" has anything to do with it, and learn to select the best layers, and males from the best layers, and you will see a steady improvement each year.

The plowing should be thorough, and the harrowing still more so. Do not think that harrowing the land just once to make the surface level is the kind of harrowing needed to prepare the soil for the hairlike roots of the sprouting seed as well as for the growing plant. Pulverize! Pulverize!! Pulverize!!! using, if possible, several varieties of harrow so as to get the soil worked over and over and made fine enough to go through a sieve. Clods have no place in the soil economy of the garden, and where they exist a perfect seedbed does not exist.

No man can afford to invest in quantities of fertilizing material and, after applying this to his land, surrender its benefits to effect by want of judgment in cultivation. From the time the sprout bursts through the earth till it is, by reason of advanced growth, impossible to go through the rows, beginning with the wheel hoe of lightest construction and, where possible, ending with the market gardeners' horsehoe, with its various suitable attachments, the soil should never, unless it be too wet for beneficial work because of a rainy spell, be allowed to be without a layer of protecting mulch of fine soil. Those who persevere in this and insist on it will be surprised to find how little need there is for the hand hoe, a tool which, under present conditions of the labor market, is the most expensive implement used in gardening. The development of tools especially fitted for the work at hand has been great, but the necessity for them by reason of labor scarcity and cost is still greater, and no man can afford to be without them in the market garden.

As when speaking of harrowing the soil, I would say: Cultivate! cultivate! cultivate! Don't wait till the weeds get ahead, and weeds of luxuriant growth will appear where conditions are right for the best growth of vegetables, but kill your weeds by constant cultivation before they get above ground.—R. F. Schwarz, Monroe County, Pa.

Some Benefits Derived from a Method. The hotbed may be used for radishes, lettuce and the like, but its greatest value is in starting those plants that require a long season in which to grow and which we can get but little good from if planted in the open ground. It will give us a longer period in which to enjoy these good things, and the higher the latitude and the shorter the season the greater are the benefits to be derived from the hotbed.

Lima beans may also be planted in sods and put out in the open ground when all danger of frost is over.

For a few days just previous to planting out, the sash should be taken off during the middle of the day so that the plants may harden up.—L. E. Scott, Chippewa County, Wis.

London's Meat Market.

The meat supply business of the world's greatest city is not without features of general interest, as described by the English newspapers: "Miles of meat! Buy! Buy! Quarters and fore-ribs! Here's the price. Weigh here and see your meat out! Miles and miles of meat!" It was about seven o'clock in the morning, and Smithfield was resonant with the shouts of sellers trying to do their last bit of business. The sight is far more brilliant and orderly looking than Billingsgate. A magnificent bulls and lofty market is arranged in streets, glowing red and pink with the raw carcases that shine in the electric light; here and there men run to and fro with mounds of flesh upon their heads, and the weight of it may be judged from the fact that a man is now in St. Bartholomew's Hospital with his arm broken, where a side of beef fell on him. For a week in the early part of December a fair average of sales at Smithfield would be 8750 tons, of which 3775 come from America, 1200 come over from Australia, and the rest from the rest of England. The live American

meat is slaughtered at Liverpool and Deptford, and the amount imported into England goes into very big squares. The Ayrshire, for instance, which has just gone up the ship canal for the first time, and is the largest twin-screw steamer that ever came to Manchester Docks, is 19,500 tons, with a beam of fifty-nine feet, four masts, and special refrigerating chambers for frozen meat from New Zealand and Australia.

Boys hurry here and there, carrying problematical portions of interior economy in baskets, and the vans stand in rows outside. Frozen meat is taken direct to the big shops from the wharves and railway stations, but the British produce goes in five-ton vans, which hold beef, veal, sheep and lamb in enormous quantities with careful packing. Many butchers lament that, owing to the methods of killing now enforced, English veal can never look so white as it did once. But English beef seems to get better and better. A big buyer for one of London's largest emporiums will pick out thirty tons of British meat and more from Smithfield alone, spending altogether from \$2000 to \$3000 in six days, according to season, and labelling all his stock exactly according to where it comes from. The expert eye, it is claimed, can tell the

run out if care is taken in selecting seed. I average about four hundred bushels per acre.—G. W. Hamilton, Oneandaga County, N. Y.

For potatoes we prefer clover stubble mowed and plowed in the fall. In spring it is thoroughly harrowed and re-harrowed, and potatoes planted in May. Seed potatoes are cut one eye to the piece and planted in the furrow fifteen inches apart and covered with a spring tooth harrow. The ground is gone over with the harrow every few days until the plants are two to four inches high, then we begin with the cultivator. We spray with Paris green, adding a pound or two of lime to the barrel to prevent the green injuring the leaves. Potatoes are dug with a two-horse plow, followed with the harrow. They are stored in the barn basement until winter, and then buried in dry ground at one and a half feet deep with a covering over that of coarse barnyard litter.—J. B. Crookston, Madison County, N. Y.

I find I can keep potatoes without much spreading until the last part of May by burying them under three inches of straw, eight inches of loose dirt and a load of stable manure on top, putting a little covering of earth over the stable manure. In opening these piles about June 1, I have



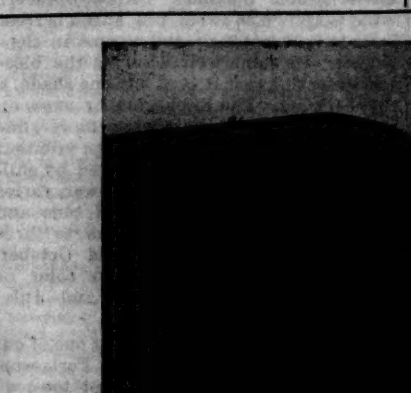
THE FARMING TRAIN IN VERMONT.

difference with a look; but the public seldom discovers. New Zealand lamb and American beef can be thawed and dried out carefully in its packing cloth until the uninitiated housewife can easily buy it as "prime English." If it is not marked and sold for what it is. Even in the choosing of British meat alone a great deal of skill is necessary. A good buyer should have been brought up to understand live stock just as much as butcher's work. Even though the best butchers are all kept back for Christmas, he must still be wary, for he may buy too much fat, and lose on tallow. In any case, he gets a large amount of fat and suit in the week, which is a heavy tax upon his profits. To prevent a joint being changed after he has once picked it out, he marks it with a special skewer known to his own firm, and various forms of wooden or metal pins employed are carefully reserved. Even when his purchases are safely in his own cold storage room, which is kept at an airtight temperature, his troubles are not over, for demand may not exactly tally with supply, and the most careful calculations may often be upset.

Expert Potato Experience.

Land is plowed in the fall and plowed again and harrowed in the spring. Seed potatoes are selected from the best hills and smoothest specimens. We plant on medium sandy loam on good soil land. The manure is applied early in the spring before plowing; the potato fertilizer, four hundred pounds to the acre, is used in the furrow. We cover with the hoe and run the cultivator once a week as soon as the rows can be followed. We dig with forks, let the potatoes dry, and then sort them and store in cellar bins.—L. J. Nelson, Windsor County, Vt.

We plow clover sod in spring, having previously applied fifteen loads of stable manure.



GOOD-BY TO THE FARMING TRAIN.

Delighted that the week of travel and hard work has reached an end, a jolly group of New Hampshire Institute speakers, their assistants and several newspaper men exchange farewells at Groveton, N. H.

WATERBURY, Wis., Feb. 10, 1904. Dr. S. A. Tuttle: I am a horseman and had charge of a barn where there were seventy-three horses. I always used your Elxit and had good results. At the present time I am in Waterbury, Wis., and cannot get your Elxit, as the druggists do not keep it. It is the best remedy I ever used, so I wish you would try and get an agency in this city for your Elxit. Yours truly, ELI J. BECK.

THE FIRST

Harman Stockade Woven Wire Fence

We prefer a medium loam well drained and planted to potatoes on clover sod. The ground is plowed in the fall and worked as early in the spring as possible. Fifteen hundred pounds high-grade fertilizer is spread in the drill. Medium-sized seed is planted three inches deep and eight inches apart in the row. The weeds are used about once a week, followed with the cultivator. The four-horse digger is used, and potatoes stored in the barn cellar. Spraying for blight of the bordeaux mixture more than doubles the yield, as we found by having a part of the land unsprayed.—L. H. Norris, Monroe County, N. Y.

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PERMANENT MEADOWS should have an annual dressing of 500 pounds per acre of a fertilizer containing eleven per cent. POTASH and ten per cent. available phosphoric acid.

This will gradually force out sour grasses and mosses from the meadows, and bring good grasses and clovers; thus increasing the quality as well as the quantity of the hay.

Our practical book, "Farmer's Guide," gives valuable facts for every sort of crop-raising. It is one of a number of books on successful fertilization which we send on request, free of any cost or obligation, to any farmer who will write us for them.

Address, GERMAN KALI WORKS, 93 Nassau Street, New York

THINGS WORTH KNOWING

If you are going to buy A MANURE SPREADER



No machine within his reach is capable of doing so much for the farmer as the modern manure spreader. But then it must be a machine with features of economy and efficiency. The I. H. C. Manure Spreader has such features. Any man of experience knows that a spreader will work perfectly when the load is level. The I. H. C. Spreader is the only spreader with a vibrating rake in front of the beater or cylinder which levels every load and any load of manure. Any man knows that the spreader operates better when power is applied at both sides. The I. H. C. spreader is driven at both sides from both hind wheels. This saves all torsion, binding, friction and undue strain, and consequently saves breakages and results in lighter draft. One lever is better than many levers in covering any machine. The I. H. C. spreader is the only spreader which is controlled and operated entirely with one lever. It has ten different feeds—can be adjusted

instantly while in motion to spread three to thirty loads per acre. Large, solid, steel axles front and rear—front wheels cut under—turns very sharp. Steel wheels—no rutting or driving out. Broad faced discs with turned in flange to keep out dirt, mud, etc. Lightest and strongest. Provided with traction lugs on rear wheels—will work perfectly on hard, frozen or wet ground. Made in various sizes to suit all requirements. The I. H. C. spreader will distribute perfectly manure of all kinds—cow, horse, sheep, straw, full of stalks, frozen, caked, etc. It may be equipped with special features known as time and drill attachments for distributing broadcast, or in drills, fine manure, commercial fertilizers, lime, ashes, salt, cotton seed hulls, land plaster, etc. Remember what we have told you—it is the manure spreader with special features which all make for success. Go to the International Local Agent and look it over, get and read the catalogue or write for further information. It will pay.

International Harvester Company of America, (Incorporated) Chicago, Illinois, U. S. A.

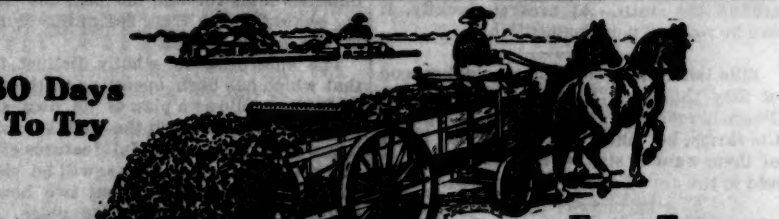
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THE FARMER'S MONEY MAKER

Why the 20th Century is one of the best investments a farmer can make; why it saves time, money, patience, and increases the farmer's bank account; why it is durable, strong, needs few repairs; how it withstands hard usage without harming it; how it increases the fertility value of manure, how it advances the market value of every square foot of ground it runs over, these, with a hundred and one other questions vital to every farmer, are answered in our handsome, new, free catalog NoA-3. Write for it. Read it.

The J. S. Kemp Manufacturing Company Newark Valley, N. Y. Lunt, Moss & Co., Boston, Mass. Waterloo, Iowa. Agents for New England States.



30 Days To Try

Why American Manure Spreader Free

It's just like this. You need an American Manure Spreader. It will double the value of every bit of manure you put on your land. It will pulverize and break it up, so it will mix with the soil easily. And it will distribute evenly, so every square foot of land will get its share. The other reasons you will find out yourself just as soon as you try the Spreader. And we will let you try it for 30 days at our expense. We send you the Spreader and supply the freight. You use it a month. Before the 30 days are up, you will wonder how you ever got on without it. The Spreader will practically earn its own cost before you send us a cent. We give you a liberal allowance of time in which to pay for it. And if you shouldn't find it exactly as represented, you need not send it back at our expense, and the freight cost you a nothing. We can afford to make you this offer because we know that our American Spreaders are well made, on correct principles, and that they will stand the test. They represent twenty-five years study and experience. Their good points are the result of our knowledge of soil needs. We have developed them along practical lines. American Spreaders are carefully and correctly constructed, and they show it. We own and operate the largest Manure Spreader plant in the world. We turn out more machines every year than any other manufacturer. Our ample capital enables us to sell our Spreaders on long time. We send direct to you because we want to keep in close touch with users of our Spreaders. This way we get a chance to tell you how to use them to best advantage and why our way will give best results. We will tell you all about Manure Spreaders, and how to spread manure, so that you will be able to select a size best suited to your needs—and you have our 30 days and a trial to select from. When you buy from us you get just the kind you should have to do your work best. We don't belong to any trust. We are an independent concern. Write today for our FREE catalog. Tell us how much land you own, how many horses you keep and how many head of cattle, sheep and hogs you have, and we will give you the Government statistics as to the annual value of your manure crop. We will also send you a little booklet telling all about "Our New Selling Plan." It will interest you and save you money. Ask at once. You will be glad if you do.

WHAT MR. HILL SAYS: HARTFORD, Pa., Dec. 12, 1905. AMERICAN HARROW CO., Detroit, Mich. Dear Sir:—I received your list of notes, and am very pleased with the construction of the American Harrow, all its parts seem to be made for long service. The work it performs in three minutes is better than I have been able to do with the fork in 10 to 15 minutes and I estimate its value to be far ahead of anything I have had in the past, especially on the hay-field, as it does the manure into such small particles as not to clog the manure fork of grain. My corn comes forward and grows up much more luxuriantly in spring. I am a well satisfied customer. Sincerely, H. L. Hill, New York, Pa.

AMERICAN HARROW CO., 705 Hastings St., Detroit, Mich.

POPULAR GOOD-POPULAR FARM

Method's New Universal

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MASSACHUSETTS PLOUGHMAN

TELEPHONE NO. 2767 MAIN.

King Alfonso does surgery. He will be married on a Friday.

The man in the tub was the original worker of the muck rake.

When Socialism aims at the breaking up of the home it is very unsocial.

The plants on arbor day endure longer than some of the commercial ones.

Caruso, the opera singer, saved his notes if not his clothing during the San Francisco earthquake.

When Hobson goes to Congress he will forget his kissing and use his lips for more serious matters.

Russell Sage gave \$5000 to the California sufferers. This was apparently the millionaire's mite.

All men must die, passing from nature to eternity. Even "Elijah" Dowie is not exempt from this fate.

Don't talk about the wickedness of San Francisco. Help it to get up. There is an adage about helping the first stone.

Let us take a little wine for the stomach's sake after eleven o'clock. Governor Guild, and bring the semicolon law to a full stop.

May the San Francisco Argonaut soon arise from its ashes. It was the brightest of the journalistic birds of the Pacific slope.

A gun in the hands of an inexperienced militiaman is a dangerous weapon. If he is allowed to bring down human game at pleasure.

Gertrude Atherton, the novelist, has been making bread for the hungry in San Francisco. This is a time when the dough is mightier than the pen.

Gorky should have come to America single and not double, and then he could have got into the New York hotels. Two of a kind don't always win.

Franklin at the court of France was nothing to the Franklin memorial which has just been unveiled in Paris. It is a perpetuity; not a passing event.

It is now time to live up to the song, "Oh never go a Maying until the month of June," if you don't want to get a cold in the head and thicken your pronunciation.

The reception business in Boston seems to be getting a little monotonous, especially when the man glorified has done nothing except in the way of securing his own promotion.

General Booth is going to Japan. At seventy-seven he can still take the salvation field against many newer comers. He is a conqueror that even the Japanese islands cannot beat.

Don't attempt to get free advertising by posing as a philanthropist during the time of a great calamity. It is rather mean business trying to make capital out of the misfortunes of others.

Princess Ena will not need many hats if she takes kindly to the Spanish mantilla, but if she does not patronize the milliners in buying her bridal trousseau, how then will talk about her stringencies.

San Francisco is not any better off now apparently than when the forty-niners first invaded it by going across the Isthmus and around the Horn. At present, luckily, it can be reached more expeditiously.

Ellis Island received in the neighborhood of fifty thousand immigrants this week. There is room for them out West and on the farms, but unfortunately a great many of them want to stay in Eastern cities and add to the crowd of the unemployed.

The late Joseph Jefferson was a dramatic artist, but as a painter his pictures now on exhibition in New York do not show that his brush was as skillful as his impersonation of Rip Van Winkle. Illusion's perfect triumph only came to him on the stage.

While the Boston Horse Show is sometimes considered mainly as a spectacle, or as an excuse for the gathering together of people of fashion, it is also to the practical man an object lesson, suggesting the types of horses most acceptable to a high class of trade.

The poor little chink may not be any better than his neighbors at the Golden Gate, but he is going to get his share of help if the wishes of the President of these United States are carried out. The heathen "Chineses" has a stomach and a back just like the Christians.

President Roosevelt should not answer for San Francisco. If it needs foreign help, let it take it thankfully if it is offered in a generous spirit. A man cannot well put on airs when he is at the bottom of the social heap and wants to rise again. Theodore is often "too previous."

Manufacturers of incubators say the trade has been very large and the demand in the Southern sections has been especially brisk. They look for a large hatch and a considerable increase in the poultry business. The present effect of the demand for incubator uses is to revive a good many eggs from the regular market.

The celebration of arbor day should receive valuable aid from the attractive little book issued this week from the office of the Massachusetts State Board of Agriculture. Special articles are included on school celebrations, roadside planting and care, relations of the trees and the birds and how to resist the insects harmful to trees.

Now that the immediate wants of the living victims of the San Francisco disaster have been satisfied as far as food is concerned, why not spend some of the money collected in Boston here, instead of sending it away to enrich Western millionaires? We have given freely without expectation of return, but nevertheless, business, like charity, should begin at home.

Building up a pure-bred dairy herd like that of Jaynes Farm is a most fascinating piece of work. It is profitable, too, if

started right, and carried on with skill and judgment. The high-grade cows pay because they are heavy milkers. They also pay because their calves are saleable at higher prices than are commensured by common stock. On quite a number of such dairy farms the sale of young stock is the most important source of profit.

The season is surely a backward one in most parts of the country. The weather often suggests blustering March quite as much as it does the approaching month of bloom and mildness. Yet beyond crowding forward the regular spring work into closer space, and thus increasing the necessary haste of the busy farmer, there is no special harm done as yet. A late season is by no means always a poor season. In fact, we anticipate an excellent year. If crops do even fairly well, the general business prosperity of the whole country assures a profitable market.

It must be very gratifying to the agents and policyholders in the time-honored and always solid Springfield First and Marine Insurance Company to be assured that it will be able to meet all claims arising from the San Francisco calamity without the slightest embarrassment. This assurance comes from its conservative and trustworthy president, Mr. A. W. Damon, who says the reserve of the company is over \$3,000,000, and that its large capital of \$3,000,000 will be intact. After the payment of all losses, we learn from the same authority, there will also remain a very substantial surplus beyond these items. This cheering announcement, coming from such a source, will be received with entire and deserved confidence.

Agricultural products are now making their highest record in the exportations of the United States, and should the present rate continue during the remainder of the fiscal year the total exportations of such products will in 1906 for the first time cross the billion dollar line. In the eight months ending with February, for which the Department of Commerce and Labor, through its Bureau of Statistics, furnishes the detailed figures, the value of agricultural products exported amounted to \$700,000,000, which is a total considerably in excess of the figures for a similar period in any preceding year. Contrasting the figures of 1906 with those of 1899 and 1901, the growth is strongly marked. The total value of agricultural products exported for the eight months ending with February, 1906, was \$700,000,000, in 1901, \$570,000,000, while the largest total previously shown for the eight months ending with February was \$684,000,000, in 1902. The total for the eight months ending with February, 1906, was \$700,000,000. While agricultural exports are larger in total value than ever before, it does not follow that they form a larger percentage of the grand total of exports. On the contrary, the percentage which they form of the total exports in the eight recorded months of the fiscal year 1906 is smaller than in any earlier year in our history, except 1905, in which they were abnormally low by reason of the shortage in the grain crop of 1904. The percentage which agricultural products form of the total exports in the eight months ending with February, 1906, is 39.3, against 63.9 in 1904, 66.2 in 1902, 68.9 in 1899, and 71.8 in 1898, considering in each case the corresponding months of the year named. This indicates that other great groups of our products are increasing even more rapidly proportionately than that designated as agricultural products, and this relative gain in percentage of the total exports occurs chiefly in manufactures.

The New Farming Train. Maine's progressive university and that hustling, successful railroad company, the Bangor & Aroostook, seem to have formed a happy alliance, and much may be hoped for as a result of the fortnight's run of nine hundred miles through the best new farming section of the East, beginning Monday of this week.

The enterprise is wholly distinct from that which has been operating in the other States and follows a plan of its own, striving apparently to avoid the mistakes and to improve on the successful features of the other train. Fewer towns will be visited each day, but a stay of about two hours is being made at each stopping place, thus allowing plenty of time for the farmers to listen to the speakers and to study the exhibits. At the evening stops are given illustrated lectures in addition to the regular programme. Nothing is permitted that suggests advertising of private interests.

The exhibits include many original features, especially in the poultry department and in farm implements and machinery, which lines were somewhat neglected in the other train. A great portion of the route lies through the home of commercial potato culture in New England, and that industry naturally couples a conspicuous place in the proceedings. The whole thing shows very careful, judicious preparations to secure lasting, practical results.

No More Watered Butter. The closer drawing of the lines in the watered-butter question has not been without its effect on the larger creameries. The Boston Creamery, one of the very largest, has issued a statement declaring that in the future the management will put out no butter containing above the legal standard, sixteen per cent. of water.

The president of this creamery company asserts that, "beyond question hundreds of thousands of dollars that have been lost the past season could be attributed to the irrigation in our dairy product. Not only is the large per cent. of water contained in the United States butter injuring the quality, but it is putting us as a butter-producing country in bad repute in foreign markets as well as at home."

No doubt the larger storage houses, particularly in the West, contain enormous quantities of butter which rate above the legal standard of water. This water is so skillfully worked into the material that it can hardly be detected with certainty by ordinary tests. Butter of this grade is made chiefly by the larger concerns, who have found it extremely profitable to sell four or five pounds of water extra with every hundred pounds of butter.

With the chief offenders ready to reform, the average butter quality ought to improve. There is plenty of legitimate butter on the market to compete with the honest grade of goods, without loading down the trade with a material which is in all respects and purposes adulterated. It is only a shade better to adulterate with water than hot fat or other material. The adulteration laws were started with an idea of imposing a check on the various history and imitation butters, but creamery men ought not to complain if the same provisions are applied to them also. It is be-

lieved that the better element in the butter trade is almost unanimously in favor of keeping the butter to the Government standard, so far as concerns the amount of moisture. Certainly the smaller makers have neither the disposition nor the knowledge that would lead them to work in excess of water. Butter made under ordinary methods will be all right in this respect and should not be forced to compete with a diluted material sold as pure butter.

The probable price of butter in June is a subject of particular interest because it is from the make of that month that the greater part of the storage supply is taken. The tendency of late years has been to increase the make of butter during the summer season as compared with the winter output. The storage system has equalized the price of butter to such an extent that the difference in summer and winter prices is not so great as it used to be, and it is of course easier and cheaper to make good butter in the flush of the pasture season than at any other time. Dealers are trying to argue themselves into the belief that storage butter will be put away at a lower price than last year. They claim that since last year's operations show that prices paid are too high to leave any profit, the figure this year must be lower or the storage people will not buy. The past experience has proved, however, that a losing year does not prevent buying the following year. The larger storage people go right ahead with their operations year after year without regard to a loss of one season. They figure on an average profit on a number of seasons together. Except for the desire to buy cheaper material, the storage people are really nothing in the situation to indicate lower prices this summer. The main inducements will be the condition of the pasture and the hay crop, also the price of grain, and the wishes of the dealers will have very little to do with the matter.

California's Sorrow. The appalling calamity which has overtaken San Francisco is without parallel in the history of the world even in seismic upheavals, and to the terror of the earth-quake which the earthquake of the Pacific coast has at the Golden Gate is practically a heap of charred ruins, leaving little or no suggestion of the magnificent buildings that once adorned its busy thoroughfares. And as to the cause of the convulsion of nature scientists differ as much as the doctors do in critical cases. Many say that it was due to a slipping of the foundations of the coast mountains upon their base, due to the uplifting of the range as the result of the cooling of the earth's crust. They are of the opinion that the earthquake of the Pacific coast had no connection with the recent eruption at Mount Vesuvius, but in contradiction of this opinion the director of the Royal Observatory at Greenwich remarks that in all probability the catastrophe was a direct consequence of the activity of Mount Vesuvius, whose eruption, doubtless, started a wave movement through the crust of the earth, and the well-known geologist, Robert T. Hill, says that personally he thinks there is a relation between the earthquake and the volcanic outbreak of Vesuvius.

It makes little difference as far as safety is concerned which opinion prevails, for earthquakes cannot be guarded against like fire, and they do not teach the lesson that a conflagration often does in regard to repeating evils which led to the spread of flames. The Mansard roofs in the business sections of Boston had, no doubt, a great deal to do with the extent of the destruction here in the great fire of 1872, and this was not forgotten in the rebuilding which followed. Perhaps, however, if there were not so many sky-scraping buildings in San Francisco, there might have been less widespread ruin, and one wonders why, in a city which was notoriously subject to earthquakes, precautions were not taken by abstaining from building less elevated structures. However, no such horrible disaster as the present one was anticipated, and in the reconstruction of San Francisco there will be, no doubt, more regard for solidity than for the less endeavor to crowd all the business into a comparatively limited area.

Why should the marts of trade be crowded together where there is space enough to travel earthward instead of heavenward? With our modern means of rapid transit it is not so necessary to have commerce retained, cribbed, cabined and confined, as it were, in one district. New York spread out advantageously in a business way, and why may not other cities, Boston among them, imitate her example? Let us hope that we may be spared sharing even in a slight degree a calamity like that which has laid San Francisco low, though, according to a writer in the New York Mail, earthquake and volcanic disturbances appear to be extending all around the earth almost in a straight line. In proof of this it says that the shocks recorded in North Carolina began at forty degrees of North latitude. Volcanic activity, it is between forty and forty-one, and at Palma, in the Canaries, the line of seismic disturbances dips a little below thirty degrees, while at San Francisco it returns to thirty-eight. "Like the ring of disturbances around the earth, within the tropics, at the time of Mount Pelée's eruption, the present condition of things indicates the possibility of a heaving or straining force passing entirely across the globe, in or about which we call the earth's crust." This is not a cheering outlook certainly.

There is nothing new for us to do, however, but to help the suffering and starving city with material aid, and not merely with wordy sympathy, which does not aid in giving shelter to the homeless or bread to the hungry. Boston has responded nobly and quickly to the appeal for aid, and she will do yet more when her philanthropic citizens of all degrees begin to respond personally to the appeal for aid from her suffering sister. It is a heart-rending sight to see the homeless and the hungry, and the sight of the suffering and starving city with material aid, and not merely with wordy sympathy, which does not aid in giving shelter to the homeless or bread to the hungry. Boston has responded nobly and quickly to the appeal for aid, and she will do yet more when her philanthropic citizens of all degrees begin to respond personally to the appeal for aid from her suffering sister. 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Our Homes.

The Workbox.

KNITTED THREAD LACE.
Use linen thread, No. 20, two No. 18 steel needles. If floor is wished use No. 100 thread and fine needles.
Cast on 16 stitches, knit across plain once.
1st row—Two plain, over, 5 plain, over (slip 1, 1 plain, pass slip stitch over), this is a narrow, 1 plain, narrow, over, 4 plain.
2d row—Slip 1, rest plain.
3d row—Two plain, over, 1 plain, narrow, over, twice, slip 1, narrow, pass slip over, over, 5 plain.
4th row—Like second, but make 1 plain, 1 puri, 1 plain, from over twice in last row.
5th row—One plain, narrow, over, slip 1, 1 plain, pass, 3 plain, narrow, over, 3 plain, over, narrow, 3 plain.
6th row—Like second.
7th row—One plain, narrow, over, slip 1, 1 plain, pass, 1 plain, narrow, over, 5 plain, over, narrow, 3 plain.
8th row—Like second.
9th row—One plain, narrow, over, slip 1, narrow, pass, 1 plain, over, 1 plain, narrow, over twice, slip 1, narrow, pass, over, narrow, 1 plain.
10th row—Like fourth.
11th row—Two plain, over, 3 plain, over, slip 1, 1 plain, pass, 3 plain, narrow, over, 3 plain.
12th row—Like second row.
Repeat from first row.

EVA M. NILES.

No Waste in Candy Business.

There is this similarity between the candy business and the iron business—the scrap is not allowed to go to waste. An observer, who had an idea that candy manufacturers must have to stand a lot of loss, because candy is so sticky, took the trouble to investigate, and learned that his idea was wrong.

The big candy makers ship to their agents throughout the country at stated intervals, usually of a week, their standard confections, and all not sold at the expiration of the interval are returned to the factory as scrap. As the candy is mostly sugar, and sugar is as indestructible as iron, it is only a question for the candy maker of getting the sugar value out of the scrap.

It is impossible to work over the candy into its original form, but it can be used in many ways. For example, the chief use to which stale chocolates are put is in making caramels and other chewy confections. It's a mistaken idea that candy must be fresh to be good. One manufacturer who makes only for the trade and confines himself chiefly to high-class chocolates and bonbons said that candy wasn't fit to eat until it had been seasoned for at least ten days. For his own use—and he is a great lover of candy, despite the general belief that no cook cares for his own mess—he keeps chocolates about a month before eating them.

This man has no patience with those who assert that colored candy is poisonous. His argument is simple. As he puts it: "What's the use of putting poison in candy when natural and harmless coloring matter costs less? Who'd put opium in cigarettes when tobacco is cheaper than opium?"

"It's the same way in my business. I can turn out bonbons in any shade you want—from the greenest of God's grass to the pinkest pink of a hunting coat, and do it all without the aid of any ingredients but pure vegetable colorings."

"I have no patience with these pure food advocates when they come nosing around the candy business. Few of them know what they are talking about and the others have taken a few sporadic cases of children poisoned or merely made ill by overindulgence in cheap candies and condemn the lot of us."

"The candy business demands an artist these days, when you have to make displays of form and coloring to keep in the forefront of the business."—N. Y. Sun.

Some Medical Fallacies.

A doctor was pointing out medical fallacies—the wrong ideas about things medical that many people hold.

"One fallacy," he said, "is that beef tea is nourishing. It is nothing but water in which certain pleasant and exhilarating meat salts are dissolved. You would starve to death on beef tea, the same as on whiskey or on coffee."

"Another fallacy is that alcohol—whiskey—warms the body. Alcohol lowers the temperature. It chills, instead of warming. Hence it is of no use whatever as a guard against cold."

"A third fallacy is that one egg contains as much nourishment as a pound of meat. Sick people without appetite think complacently that if they take an egg or two a day they are doing well. As a matter of fact, they are doing anything but well. They must remember, if they are substituting eggs for meat, that eight eggs, not one, are required to equal one meat pound."

"Then, there's the liver fallacy. Many, as soon as their stomachs get out of order, begin to treat their liver. But the liver is a dangerous thing to treat unless one understands it, for there are over ninety distinct liver troubles, and what is good for one of them may be bad for all the rest."—St. Louis Globe-Democrat.

The Raw Egg Diet.

The latest recipe for health, happiness and longevity is a raw egg diet. The devotees of the diet say that an egg is entirely spoiled by cooking, and in order to extract from it all the virtue that it is capable of imparting it should be swallowed not only raw, but whole. This does not harmonize with the Fletcher philosophy of hygienic salvation by chewing, but the raw egg people do not appear to care for that. A point upon which no one is likely to dispute them, however, is that the egg should be eaten as soon as possible after laying. The raw egg diet is not recommended for everyday use. The eggs are taken before meals for a few days or a week, and then discontinued for a week or a fortnight. A daily egg diet is said to be dangerous on account of the superabundance of sulphur that it would introduce into the system.

The New Towels.

The woman who is doted with her needle may indulge in pretty towels whether her purse is long or not, for there is no end of handwork used to beautify towels in these days.

One of the prettiest methods, and at the same time one of the most practical, is scalloping. The plain huckaback is got and the ends done in the simplest form of scallop, heavily padded. With a quarter to mark the scallops and a line drawn across the end to keep them even, the marking may be done at home.

Instead of the fringe so popular a few

years ago, many of the handsomest towels are finished with a hemstitched hem or with embroidery or with Irish lace, although the latter is very expensive.

The very large towels are out of fashion, the favorite size being about twenty-five inches wide by forty long. Hand towels come in several sizes, the smallest of which is fourteen inches wide and twenty-four long.

Drawn work as a trimming for towels offers numerous possibilities to the woman who can do it well, and so does embroidery work. Both Irish and German embroidery are popular. All embroidery is of the variety known as blind, and the designs are not too elaborate.

Why Nurse Doesn't Find Job Long.

Carefully gathered statistics appear to show that the marriage of all women are trained nurses. Though complete figures have not as yet been compiled, from a considerable mass of data the conclusion is drawn that nine out of ten trained nurses marry during the first seven years of their occupation as such.

When a pretty young woman speaks of devoting her life to the self-denying profession of a trained nurse she is, perhaps unconsciously, a very sure figure of speech. Statistics show that she has an even chance to be married within four and a half years and that she has one chance in eight of becoming the wife of a physician. The chances are five to one that within ten years she will marry one of her patients.

The importance of these figures from the viewpoint of the sociologist is obviously great. Pretty young women in steadily increasing numbers are entering the field in question, in which there seems almost to be plenty of room for fresh recruits, who are required to fill the places of those who get married and pass out of the profession forever. Thus, owing to the causes suggested, it is rare, indeed, to discover a trained nurse who has been in the business for as much as ten years.—Saturday Evening Post.

Postage-Stamp Tongue.

"A number of ailments, some of them extremely dangerous, are complained of by the general body of postage-stamp tongue," said a physician. "Postage-stamp tongue, in a word, is any disorder contracted from the licking of postage stamps."

"Three or four persons a week visit me with postage-stamp tongues. They have a throat trouble, or a skin disease, or a pulmonary complaint, brought on by the reckless habit of stamp-licking."

"A stamp should never be licked, as its gummed surface is always squirmy and pulsating with germs. If any licking is to be done let it be applied to the right-hand upper corner of the envelope, where the stamp goes, for there the germs are apt to be sparser."

"To be safe, though, the tongue should never be applied to either envelope or stamp. A damp sponge should be used in the tongue's stead."—Philadelphia Bulletin.

Do You Rest Properly?

Remember that the most complete and the most natural rest should come at night when the day's bustle and worry over the tired brain and body is given an opportunity to throw off the strain of the work, and for eight hours or so may be freed from nervous tension. Not one person in ten knows the benefit to be derived from real rest, because she does not know what real rest is.

Lying with stiffened spinal muscles, constrained chest and head bolstered up on large pillows, often the hands clinched and face drawn into grotesque shapes—that is not real rest.

So much wasted energy when life is so short, and so much energy is needed for necessary work and so much more for necessary enjoyment!

It is not easy to learn—relaxation—but it can and must be mastered before one can in any wise get that full measure of life and health which is his rightful inheritance. Relaxation cannot be taught, it only comes with intuition and becomes easy with practice, just as one forms the habit of waking at a certain hour in the morning.

Learn to let the couch hold you. Most of us cling to it, unconsciously, of course, as though at any moment it might go down beneath us. Let the muscles, which have been all day like rubber bands stretched to their fullest length, come to normal. Drop all your petty cares, shut out all plans and confidences and schemes, breathe deeply and regularly the fresh air from your opened windows and sleep.

The Use of Perfume.

The girl who is fastidious to the point of observing the little niceties invariably is chary in her use of perfumes. She never indulges in those which come in liquid form except to put a few drops in the bath water, and those in powdered form she selects with the greatest care and never by any chance those that are at all aggressive.

The immoderate use of heavy scents is in most exorable taste. It suggests blowsy hair and cheap imitation jewelry, and is distinctly to be avoided.

It is the soyls and Charlybills which has wreaked more than one young woman's aspirations, and a habit which, like the habits of smoking and gum chewing, grows with indulgence.

Frequently, perhaps generally, the abuse is the outgrowth of a liking for delicate perfumes, which being persistently gratified increases, dulling the senses until stronger and stronger scents are required to satisfy and the wearer is unconscious of the distasteful effect upon others.

So, the best way is to dispense altogether with the liquid perfumes and substitute sachets, as many as you will, so long as they are the delicate odor. Fasten them here and there in the gown or in the wrap and scatter them about in the trunk, even with the trunk sachets. Those in the frocks it is better, if possible, to have made of silk or mull as near the shade of the frock itself as is possible. Sachets for the trunk may be made of Japanese paper, or even prettily decorated envelopes filled with the powder are dainty and satisfactory. But any girl of the type which uses sachets, knows of a hundred different ways of making them, although she does not know perhaps, that sandalwood andorris root mixed and violet are called the "aristocratic" odors; that they are really the only ones used with absolute impunity, and that it is always advisable for a girl to appropriate one perfume to herself to make it individual, so that it will cling to her, and like the monogram on her monogram distinguish her own personality with its "stealing scent."

Even the least sentimental among us at one time or another have instinctively closed our eyes and sighed as some person

connected with bygone days and episodes was waited to us—perhaps from some long-remembered source. We remember how it thrilled our senses then, and how it seems to us again and again, but it is never the harsh, aggressive odor of musk or like that speaks to us of half-forgotten things and brings us in touch again with long-lost personalities. Only just that same faint sweetness that lingers in the mind rather than in the senses.

To turn abruptly from the sentimental, perfumes were originated as a necessity rather than a luxury, and were introduced into the world of the masses and half-pile for the purpose of counteracting their distasteful disagreeable odor. They were not mixed with the pomades at all as we have our cold cream and other toilet preparations, but used exclusively as deodorizers, and the stronger the more popular they were.—N. Y. Mail.

Feeding the Baby.

It is a bad plan to bring the baby to the table and let him sample the various things on it. Sometimes grandmothers and grandfathers, and loving relatives have been known to administer delicacies to baby on the sly, to his ultimate discomfort. Indigestion in the first days of a baby's life is often due to some dainty thus offered, or to a meal of some starchy food, as cracker or toast, water, sugar and water, or cow's milk, which the stomach cannot digest, and spoiling and poisoning is the result.

Colic or inflammation may follow, and these some grave disorders, as inflammatory diarrhea, or cholera, or dysentery. In the summer the latter often prove fatal in a few days, or even a few hours. It is a good rule not to give any solid food to a baby until he has teeth to chew it with.

Domestic Hints.

RICE PUDDING WITH STEWED APPLES.
Put a breakfastcupful of rice into a pie dish and bake in a moderately hot oven two hours. Do not put in any sugar. Have some nicely stewed apples to serve with the pudding. Peel and core four large apples, put them in a saucepan, add a cupful of water and a tablespoonful of sugar and a little lemon peel or cinnamon. Cover close and let them cook until tender; ten to fifteen minutes should suffice.

ALMOND CUSTARD.

Half a pound of shelled sweet almonds and three ounces of shelled bitter almonds scalded and blanched and pounded in a mortar, with a little rose water added. Stir slowly into a quart of cream or rich milk, in which is dissolved a teaspoonful of water and a little lemon peel and cinnamon. Cover close and let them cook until tender; ten to fifteen minutes should suffice.

ROAST MEAT OF VEAL STUFFED.

Take a piece of veal weighing about five pounds, lay it on a pastry board, and with a sharp knife cut a pocket between the meat and the bone. Make a stuffing with a thick rasber of rather fat bacon, a tablespoonful of finely chopped parsley, the same of chopped onion, a little lemon peel and marjoram, well seasoned with pepper, and a teaspoonful of bread crumbs. Mix the stuffing with one whole egg, fill the pocket with the stuffing, sew it in with coarse cotton. Have ready a baking tin, with plenty of hot fat in it, bake in a hot oven for one hour and a half, basting frequently. Take up on a hot dish, pour a nicely made butter sauce over, and serve.

PLAIN OMELET.

Mix one-half teaspoonful of flour with four tablespoonfuls of water, and add to the beaten yolks of two eggs. Put in a half teaspoonful of salt and a dash of pepper, and lightly stir in the beaten whites. Put one-half tablespoonful of butter into a hot frying pan, turn in the omelet, and when the centre looks dry run a knife across the edges and fold over. Slide carefully on to a warm platter.

ORANGE CHEESE CAKE.

Take out the pulp from two oranges; boil the pulp until it is quite tender, put it into a mortar, and beat it into a paste with twice the weight of the oranges in pounded sugar; then add the pulp of one more orange, and a piece of butter the size of a walnut; beat all the ingredients well together, and lay the orange mix in some patty pans lined with some rich puff paste; bake for about twenty minutes.

Hints to Housekeepers.

When frying croquettes or doughnuts in fat, it will tend to drop in a small bit of bread when smoke begins to rise. If in about five minutes the bread begins to brown, the fat is ready for use. If oilcloth has become shabby put a little glue in a pint of water, dip a piece of flannel in it and cover the oilcloth with it. When dry, the appearance of the cloth will be much improved. Wipe off furniture with a cloth wrung out in hot water before applying furniture polish. A hot cloth will result, and will not show finger marks.

Clammy hands may be improved by washing in very hot water, and when thoroughly dried dusting with fuller's earth. A sprinkling of ordinary starch, powdered and scented with vanilla or rose water, in the glove over also help to do away with the unpleasant feeling. Massaging the face is quite as much of a help to nerves as a preventive of wrinkles.

For the invigorating and strengthening salt rub, soak a large Turkish towel over night in a strong salt solution, and rub the body well after the morning bath.

A tablespoonful of olive oil taken three times a day, it is claimed, will banish a headache, cure indigestion and make a thin person stout. If a pinch of salt is added it will be more palatable. When shirwaits cuffs begin to fray, an excellent plan is to dampen the cuffs and carefully cut along the top of the shirwaits line, and then while still damp, turn in the edges and re-stitch. This will freshen up your waist, and make it last for some time.

If the juice of a fruit pie runs out, try putting a small round of white paper in the centre of the upper crust.

Popular Science.

Siberian ice is reported by Hildebrandt to have ordinary depth of 125 metres (five feet) to 150 metres, never exceeding 250 metres. In just completed measurements on running streams, Professor Vokosov has found a thickness of 0.70 to 0.80 metres on the Jemelna, two to 2.50 metres in the extreme narrow and only 0.50 metres at Verkhayansk, one of the extreme cold spots, in latitude sixty-seven degrees, thirty minutes.

Refrigerator cars cooled by the expansion and re-compression of a readily liquefied gas, such as ammonia, with good results on one of the railroads leading from New York. Refrigeration was controlled by an automatic thermostat. This consisted of a coiled tube filled with a volatile liquid that expanded to a considerable degree on heating, and as this caused the pressure to rise the coil was uncoiled, and the motion of coiling and uncoiling was made to move the valve controlling the liquefied gas. The thermostat was arranged so as to be automatically thrown out of gear or restored to working condition at the opening or closing of the doors of the car.

The worthlessness of the Sahara Desert is growing smaller than has been believed. Prof. E. F. Gautier, the first explorer since 1880 to cross from Algeria to the Niger, has lately found the desert places, one mile from the Niger, a wide belt of steppe having been

six to twelve inches of rain a year, and covered with weeds and grass. Evidence of a large stone age population abounds, including weapons, grinding stones, rock drawings and graves. It appears that the region must have gradually dried up, but that the desert conditions are now disappearing, and the rain belt is again extending more and more to the North.

The Sudd country, to the south of Egypt, is a region of papyrus swamps, which has resulted from the silting up of an ancient lake, more than sixty-two thousand square miles in area, which once received the waters not only of the Albert Nile, but also of the Blue Nile and the Sobat. It is proposed to cut off this swamp area from the river channel by a canal from the junction of the Sobat and the Nile, a distance of two hundred miles. The smaller discharge of the Upper Nile, about six hundred cubic metres per second, would thus be passed on to Khartoum, and would increase the volume of the stream at that season fifty per cent., instead of having lost by evaporation in the swamp. No storage works at the equatorial lake can give effective regulation without this "cut-off."

A new plan for improving the hearing is better tried in France. Action of the drum of the ear, as is well known, vibrates a chain of three tiny bones impinging upon a liquid, which in turn excites some twenty-one thousand minute hairs terminating the auditory nerve, and death is usually regarded as a disease of the drum or the middle ear. The idea of Dr. Koss, Marcel Nader and Roussot is that, unless distinct external defects are shown, atrophy of the nerve-hairs is the cause of impaired hearing. Each of the three bones is to a certain extent, and by means of the "tympanometer," an apparatus yielding a great variety of tones through the action of tuning-forks and a sounding board, it is sought to give exercises to as many nerve ends as possible. This has seemed to strengthen the drum and the middle ear, while others are gradually aroused into activity.

Of the 52,324 square miles of England and Wales, Miss Nora E. Macdonald finds that 25,422 are under 200 feet in elevation above the sea, 13,285 are between 200 and one hundred feet, 10,676 are between one hundred and one thousand feet, 4003 are between one thousand and two thousand feet, three hundred are between two thousand and three thousand feet and four are more than three thousand feet.

The heated truth is that the world is that of dy-making from coal-tar. Tar and the small of it are the best of all tonics and tissue builders. The average life of a tar worker is eighty-eight years. The mortality is eighty per cent. lower than in any other industry. Light uses ordinary petroleum without a wick, and a tube only one-eighth of an inch outside supplies the oil, which is vaporized and mixed with air before being burned in the mantle. The light is cleared of soot and more diffusive than any other. One gallon of oil is sufficient for a 1000 candle-power lamp for fifteen hours, and enables a person to read at a distance of forty or fifty yards.

In a simple German method for copying manuscripts or printed matter, the object is placed face upward on a table, and a mirror is arranged above it at an angle of 45°. The reflection is focused in the camera in the usual way. A smooth surface, blank, or negative, paper is used instead of a glass plate, and the paper and the mirror are held in a special ground. With proper exposure and development a positive print is unnecessary, the characters being as legible as black on white.

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while in course of construction. While the excavations are at work, the hole in the ground which they are preparing for the foundations seems so wide and so deep that the onlooker wonders what kind of building can ever be made big enough to fit into it. But when the foundations are laid and the walls begin to go up the site shrinks amazingly. The structure, viewed in its skeleton form, appears of only ordinary dimensions. Its proportions continue to develop until it is more than two-thirds completed. Then, suddenly, at a certain point, it begins to grow again. From that time it adds to its dimensions daily, and by the time the windows and doors and finishing touches are in place the building seems about twice as large as the original excavation had suggested.

LARBOARD AND STARBOARD.—"J. G.": Instead of the terms "port" and "starboard" which are used nowadays, they used to talk of "larboard" and "starboard." Starboard has nothing in common with stars, but is really the Anglo-Saxon "stier board" for "steer board," because in the old galleys which were steered by oar the oar was fixed somewhat to the right hand side of the stern, and the helmsman held the inboard portion in his right hand. "Larboard" was probably a corruption of lower board, the larboard side being considered inferior to the other.

Historical.

Tennis was played in London in the sixteenth century. Both Henry VII. and Henry VIII. were fond of the game, and Charles II. was an accomplished tennis player.

Marine insurance dates back to the time of the Caesars. Claudius Caesar having been the first to insure vessels. During a famine he issued a proclamation that all vessels engaged in the carriage of foodstuffs meeting with an accident would be replaced by the state, and by so doing largely increased the fleet of merchant vessels.

Friction matches are a comparatively modern invention. They were first made in the United States in 1828 by L. C. Allen of Springfield, Mass. Before this time a clumsy form of match was imported from France, which had to be dipped into a bottle of sulphuric acid before it was lighted. This took a great deal of time and trouble, and Allen, seeing the necessity of friction matches, set about to make them, and succeeded. He neglected to patent them, however, and on finally applying for a patent, found that a man named Phillips, who was a peddler, had discovered through a third person the secret of making the matches and had already obtained a patent. Allen, though the real inventor, was forced to become a mere manufacturer under another man's patent.

An instance of great presence of mind was narrated to me by John Russell Young, says a writer in the Grand Magazine. Once during the civil war, when Grant was in subordinate command, he was reconnoitering along near the enemy's lines. Suddenly he found himself confronted by one of the Confederates' pickets, who was placed face upward on a table, and a mirror is arranged above it at an angle of 45°. The reflection is focused in the camera in the usual way. A smooth surface, blank, or negative, paper is used instead of a glass plate, and the paper and the mirror are held in a special ground. With proper exposure and development a positive print is unnecessary, the characters being as legible as black on white.

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BREEDER OF HIGH-CLASS
SCOTCH AND SCOTCH-TOPPED
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Outsiders on application. Visitors welcome.

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Will compile catalogues of Friesian Durhams and short-horns. A breeder of Friesian Durhams and a long-breed of pure-bred stock.

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HARRY WEISSINGER & SON,
SHELBYVILLE, KY.

Breeders of
Aberdeen-Angus Cattle.

"We go," they said, "to those who mope
Who look on life rejected.
Who weakly say 'goodby' to hope,
We go where we're expected."
—ABON.

people called him silly and ashamed him and
nobody made fun of him. Columbus was
in Genoa. Columbus discovered America.
Columbus went to see the king and so the king
and she would sell her gold and jewelry. When
Columbus was a boy of thirteen he ran away

The London milkmen have a cow whom they correspond to the "Stirredolium," a top editor of the German press. When a man is arrested for selling below legal grade is entitled to summon his cow to his defense.

to know, to know the other as Christ, to know
himself for himself, as man who enough
knows, but to come to heart with one an-
other, and one another, help, inspire, and
love one another,—imitation of Christ.
Yes, things are hard sometimes. And we

THE KALAMAZOO CO. SAN MARINO

Please send me Write just
 these things on a postal card or in a
 letter— I have loads of manure
 to spread this spring; I will plant ...
 acres of corn; I have acres of
 corn No. 317. Write for it today.
Box 57, Chicago, Illinois.

This image shows a blank, aged, cream-colored page, likely an endpaper or flyleaf of a book. The paper has a slightly textured appearance with some minor creases and discoloration, characteristic of old paper. The right edge of the page shows the binding structure, including the stitching and the dark inner cover material. There is no text or other markings on the page.

The Horse.

The Horse Show.

Boston has had successful horse shows in past years; in fact, these exhibitions have been noted for the quality and number of the entries. But all previous attempts have been eclipsed by the show which has just closed in Mechanics building. In number of entries, in the quality of the exhibits and in the interest taken in the show, the past exhibition distances all its predecessors. With the famous strings of Eben D. Jordan, William H. Moore, Reginald Vanderbilt and others entered in many classes, the competition has been more than usually severe, and in almost every event the award of the ribbons has been determined only after very careful consideration by the judges.

The show opened Monday morning, and the third event on the card was the judging of a class of forty-nine hunters over the jumps. In the afternoon there was another hunter class, and these events, always among the most interesting of the show, attracted much attention from the spectators. Tuesday forenoon there was another hunter class, with a very good number of entries, and also a class for ladies' saddle horses. In the afternoon the pony jumpers, four-in-hand and numerous harness classes occupied the programme. The evening judging wound up with the event for thoroughbred hunters.

Wednesday and the balance of the week was replete with attractions. The ladies' hunter class in the morning, with ladies riding, created much excitement; while the hunt club competition in the afternoon was one of the star events of the show. In the evening Troop K, Fifteenth United States Cavalry, from Fort Ethan Allen, made its first appearance in exhibition and rough riding drills. Thursday, the holiday, the cavalrymen gave exhibitions, and there were several pony classes for the benefit of the youngsters, who made up a considerable part of the attendance.

It was a very close rub between Judge Moore and Eben D. Jordan for premier honors at the horse show, and although Judge Moore heads the list of winners with a grand total of \$215 in money and sixteen blue ribbons, he did not have any advantage in the harness classes, notwithstanding the fact that he had almost twice as many entries as Mr. Jordan. The latter won fourteen blue ribbons and \$106 in money.

Judge Moore's money total was swelled by the large number of seconds to his credit. The star of the Jordan string was the imported mare Hildred, who won three championships at the show, and won in every class in which she was shown. Reginald Vanderbilt was third on the list of winners, with ten blues to his credit and a total of \$810. Miss Gertrude Gilbert made a big winning with the Baron, who won six blue ribbons and a total of \$665 in money. E. T. Stetson also made a big winning with his famous light harness horse, taking five "blues" and \$650 in money. J. W. Harriman of New York, whose horses were shown by J. H. Donnelly, made a profitable trip to Boston, and the New York dealers, George Watson and Lehman Strauss, more than paid expenses.

A colt, if he is worth keeping at all, ought to sell for enough as a three-year-old to pay for his keep, and if he should happen to turn out a crackerjack the price he would sell for would be a small fortune to an ordinary farmer, and more than one mortgage has been lifted by such a sale.—Horse Breeder.

Butter Prices Lower.

The increase in the amount of fresh made butter, most of which is but ordinary in quality, has the effect of making prices decline a little, with a dull market. There is yet a considerable amount in cold storage, and much of that is of a rather low grade. Buyers do not care to take very heavy stocks of it, but are waiting for the new supply to show some indications that the cows are beginning to find some grass in the pastures.

In New York it is reported that the new receipts are generally well cleaned up at the end of the week, and there is a firmer feeling there on any choice lots of creamery, but factory and dairy goods rather slowly. There is not much wanted for export yet, only 102 cases shipped last week. Some extra lots of renovated salt at 17 cents, but more goes at 18 to 19 cents, with low grades offering at 10 to 14 cents. Old cheese is held very firm in Boston and New York markets. New cheese is coming forward rapidly and is being offered at 10 cents, but buyers are not anxious for it, and as the factories seem anxious to sell there is a good chance for lower prices to be made.

Latest cable advices to George A. Cochran from the principal markets of Great Britain give butter markets as somewhat firmer. Decreased arrivals give holders a better position, but stocks are liberal, and they are anxious to keep every channel of consumption open. Finest grades: Danish 24 to 25 cents, New Zealand and Argentine 20 to 21 cents, Russian and Australian 20 to 21 cents. American creamery is having a better sale at 18 to 19 cents. Ladies remain unaltered and have a slow sale.

Cheese markets, while steady, are somewhat lower. Anticipation of heavy arrivals of new cheese causes holders to be less exacting than heretofore. Finest American and Canadian September 14 to 14 1/2 cents.

Vegetables Abundant.

The market seems to be well supplied with vegetables. New potatoes from Bermuda and Florida have arrived, but as there is yet a plenty of old potatoes from Aroostook County, and they are very good, most consumers prefer them to the new crop, many of which are small and too immature to be first class for table use. Old cabbages seem to have disappeared, but the new crop is here and selling at reasonable prices. There is an oversupply of old onions, and the farmers are willing to accept almost any offer to dispose of them. Many of them are soft and will decay soon. Lettuce, spinach, dandelions, and all the various vegetables that are classed under the general name of "greens," have been quite plenty, but there has been a good demand for them and prices are rather firm this week than they were a week ago. New beets and turnips are brought in grown under glass, and are more popular than those that are brought here from the South. Thus we can have all the summer vegetables in the early spring, and, in fact, they are in our markets nearly all the year.

The Egg Trade.

While eggs are coming in more freely, there has not been such a supply of fresh laid as many expected would come in April, and the price has declined but little. Those that are in cold storage are being worked

off rather slowly, and undoubtedly at some loss to those who stored them. If egg prices go down we may expect more chickens hatched out, and perhaps may have lower prices for poultry next fall. Packers have said that the chickens have been scarce the past two years because many preferred to sell their eggs in the spring than to try to increase their flock of pullets.

Conditions Favorable to Farmers.

Farmers and gardeners around Boston, and probably in other sections, have done an unusual amount of early plowing this year and considerable planting or sowing of spring crops. We do not remember a season when so much has been done, not only by the professional market gardeners, but in private gardens and on the larger farms, in April, as has been done this year. With the soil in good condition as to moisture, neither very wet nor too dry, it only needs good seed, plenty of fertilizing material and care, after the plants begin to grow, to insure good crops the coming season. The farmers have learned the importance of these three items necessary to success so that most of them will do their best in that way, while the few who neglect them may be found among those who will be grumbling next winter that "farming does not pay." The apple and pear trees in all but a few unfavorable locations show no signs of having been injured by the warm months of winter followed by cold nights in March, and give promise of a full bloom, which will only need attention by spraying, and other methods of combating insects and fungus diseases, to develop into profitable crops. The grass has made a good start, not as rank as it might have been if we had had more rain and warm days in April, but a slow start at first indicates a thicker growth at the bottom and a better yield of hay or better feed in the pastures than might have been the case if it had been pushed forward more rapidly by warm weather. Now we only need "a wet May to give a barn full of hay." Yet farmers should not trust too much to these favorable indications. A good field of sowed corn, Hungarian grass or millet, or some other crop that can be used as green feed if the chances to be a summer drought, or that can be cured or put in the silo for winter use if not needed before, may save a shrinkage in milk in a dry season, and if it remains for winter, the farmer can then decide whether to sell hay or keep more stock on the farm. Selling hay robs the soil of its fertility to no small amount, while keeping more stock adds to it by increasing the size of his manure heaps, which are to him of more importance another season than money in the bank, as they pay a greater dividend.

Signs of Spring.

Budding plants and nursery stock begin to appear upon South Market street again and are in good demand. The end of the street is gorgeous with bright blossoms early in the morning, for flowering plants are more in evidence than garden vegetables. What a difference there is in the amount of those and of out flowers sold here now to the amount but a few years ago. About the close of the civil war one grower brought in a few in a basket on his arm in the morning and the trade has grown from that beginning.

Canned Goods.

When the canning factories and packing houses begin producing the goods that they need for the alleged reason that they cannot obtain them of the quality that they want from those who have been growing for them, it does not show that they have a very good or a very teachable class of producers. The best sugar manufacturers long ago began to purchase seed and fertilizers for the growers that they might grow better than the rich in sugar contents. Canning factories in the Eastern States furnished tomato plants, seed corn, peas and beans to those who contracted to supply them that they might be sure of getting the best varieties, and the most and poultry packers have furnished breeding stock to farmers and farmers' wives that they might no longer be obliged to purchase scrub stock that was of breeds not adapted to make choice meats. Having done this, and exercising a little supervision over them as they acquired a right to do by becoming in this way a sort of partner in the business, they have made sure of being able to get stock that is nearly uniform in size, shape, growth and condition of fattening. Canned meats, fruits and vegetables or cold storage eggs are rather poor substitutes for the fresh products, but there are times and places when it is necessary to accept the substitute or go without.

Curing Pork.

For curing pork a good preparation is for each one hundred pounds of meat take one quart of salt, one-half pound of brown sugar, one ounce black pepper and a very little cayenne pepper, to which add one pound of saltpetre, which has been previously dissolved in one-half gallon of water. Mix the materials in a tub and rub them into the pork, first on the skin side, then on the flesh side. Leave in a clean place two or three weeks then hang up and smoke.

The Farm Train in Potato Country.

For the greater part of the past ten days the farmers' special train has been traveling in Aroostook County, through the heart of the great potato region of Maine. The season is backward and mud rules and reigns, but nothing prevents crowds of farmers meeting the train at every stopping place. No planting has been done, but growers are glad of the chance to swap ideas with the institute people and with one another. They seem especially interested in spraying, in farm implements and in the model outfit for home mixing of fertilizers. Many of them insist, however, that no home-mixed article will answer for the combined planter and drill which nearly all use here.

The Aroostook growers are mostly experts and seem to have worked out a sys-

tem perfectly successful under their conditions. Some of these points will be brought out through interviews to be published later. The farmers seem eager to learn more about new ideas brought out by the experiment station workers, and are greatly interested in the city market end of the business. Perhaps the greatest benefit of the train meetings, however, is to stir up the farmers and make them think harder than ever before.

Generally the variety of potatoes planted is the Green Mountain, although it is said that any white potato goes for a Green Mountain, and that it is sometimes difficult to find two genuine Green Mountains in a barrel of potatoes. This is due to want of care in the selection and care of seed. The Irish Cobbler is the earliest variety grown in this section of the country; the variety most grown for Southern shipments for seed is the Red Bliss Triumph, while the best yielder is the Delaware. The Hebron and Elephant varieties are grown to some extent.

At Houlton the farmers estimate the cost of raising potatoes at about twenty-five to thirty cents per bushel, which leaves quite

speakers told how a farmer in Kennebec County had raised on his farm crops that had a total selling price of \$2500.75. Potatoes were not mentioned in this list. Some of the principal crops were milk, \$2000; hay, \$300; eggs, \$200; and calves, \$200; eggs from thirty hens for one year, \$40.

A prominent feature at every stop has been the number of children that have been on hand. They have come to the train loaded by their fathers. They have shown great interest, and in nearly every place they have had a special speaker, E. F. Hinchings, and he has interested them in his excellent exhibition of insects.

PORT FAIRFIELD TO CARIBOU.

The hard luck, weatherwise, of the Maine farming special train continued this week with the Northeast storm, which struck Aroostook County in full force Monday morning. But the speakers and demonstrators showed no signs of discouragement. On the contrary, they seemed delighted with the numbers and spirit of the crowds. The weather and the soil conditions did not quite permit working in the fields, and so there was no counter attrac-



THE NEW SPECIAL FARMING TRAIN.

Now touring over the line of the Bangor & Aroostook Railroad in the great potato and general farming country of Northern and Eastern Maine.

a margin of profit at the present price of \$3 per barrel. The yield, taking one year with another, is reckoned at about three hundred bushels per acre under good care and liberal fertilizers. The light-colored loam, with a slight mixture of clay and no large stones, is just the thing for quantity and quality of the potato crop, and permits the use of all kinds of machinery.

The talks on fruit growing and on poultry culture evidently contain much that is new, these branches of farming having been somewhat neglected because of the intense specializing on potatoes.

A man at Oakfield, who had driven twelve miles, said to the instructor: "I am glad that I have come to the train; this poultry exhibit interests me and it has put me on the right track."

There has been more than one example of this sort. At one stop Professor Munson, who has charge of the pruning and grafting exhibit, was called out to see an orchard that was being ruined by mice. In a few words the remedy was explained. Thus the special proved to be a direct benefit to this man. The majority of the people, however, are benefited in a more indirect manner. They see the exhibits and listen to the speeches; go home and think them over, and then they write to the university for more information, and before long they are getting better results on their farms than ever before.

The special is not without its amusing side. At every stop there is usually some funny incident that serves to liven up the trip.

At Fort Kent two big rivermen, right from the drive, got into a dispute over an agricultural point, and before it could be

tion, and everybody not afraid of the rain could be present. The crowds have been as large as could be properly handled and instructed, never less than two hundred, and usually much larger.

The first stop was at Fort Fairfield, in the midst of potato land as good as any in the country. Long, gently sloping fields in every direction, with patches of evergreen forest in the background.

"Note the fine drainage conditions," remarked Prof. G. M. Goveall. "The underlying ledge of slate lies on edge and the surface water drains down through the seams, a perfect natural drainage, aided by the slope of the country."

"I expected to see a more level country," said one of the visitors.

"It is all rolling land through the valley of the St. John's river system," replied Professor Goveall, "just as good over in New Brunswick as here. The slopes help air drainage as well as that of the water, and there is less danger of blight and rot."

After the crowd had looked over the exhibits, the meeting on the station platform was addressed by several of the station forces. Prof. G. M. Goveall spoke fifteen minutes on dairying, explaining the model stall and the methods of getting clean milk from a clean cow in a clean stall into a clean pail by a clean man in clean clothes, all in a clean barn. Prof. W. D. Hurd told how to mix fertilizing materials, and Prof. E. F. Hinchings told of the spread of the brown-tail moth, and urged that suspicious nests or insects be sent to the station for identification. So far the brown-tail moth had not been found east of Bangor.

Fort Fairfield is on a branch line of the



WITH THE FARMING TRAIN IN NORTHERN MAINE.

A country of rich meadow land and rolling hills.

settled they had come to blows. The crowd left the special and poured out into the yard where the fight was on. It was a short one, but had given the people an insight, and they were all the more anxious to learn about agriculture.

There is a fine exhibit of horses' teeth of all ages from one year to thirty, with instructions for determining the age. At one station a horse dealer was examining them and said in a laughing manner: "You will ruin my business; a man will be able to tell the age of a horse with a month after he has studied this exhibit."

One thing the speakers are trying to do is to show to the people of Aroostook County that there is something else that they can raise besides potatoes. One of the

railroad and located quite close to the line. Prices of farms, by the way, are a great deal higher on the United States side, thanks to a tariff about equal to the cost of raising the potatoes. Land is not quite so high as in Houlton, or some other places on the main line, several of the outlying properties being held at less than \$40 per acre for the cleared land. But some of the most desirable farms have reached \$100 or more per acre, including improvements.

Returning to the main line, the train meetings were held at Bangor, Mars Hill, Presque Isle, Van Buren, New Sweden and Caribou, then leaving the main potato country and, returning toward Oldtown, is making stops at nine or ten more places along the line.

The Old Reliable New American Cultivator Sold on an Entirely New Plan. We Let You Test it on Your Own Farm a Full Month—FREE

PROBABLY no other Cultivator is so well and favorably known to the farmers of this country, from East to West and from North to South, as the New American. We have sold them for many years and they have stood the test of time. Simply send us a trial order for the New American Cultivator, and we will ship one to your railroad station, freight prepaid. You don't pay us anything. We don't ask you to make any deposit. You just take the Cultivator home, and use it a month FREE on your own farm. Give it a good stiff test. Cultivate with it just as if it was your own.

If you don't find it exactly as represented—if it doesn't show up to be all we claim, take it to the railroad station, and tell the agent to ship it back to us at our expense. The use you have had of it won't cost you a penny.

If the Cultivator is as represented, you can pay as suits your convenience. We will allow you any reasonable time. How's that for a fair proposition?

You see we're not new in the agricultural implement business. We have been making Cultivators about as long as any house in existence. It means that we have the high standard of quality we maintain. It means that when you buy a New American, you get a hundred cents worth of Cultivator for every dollar you pay.

If you have new crops of any kind, you will find it hard to do it in any other way. You know where to find us. We know where you are. You get good results, and all your doubts are gone, when you see the machine itself, so that you can find out for yourself about its merits.

We will send you a New American Cultivator on trial at our own expense. You needn't even stand the freight. Simply send us a trial order for the New American Cultivator, and we will ship one to your railroad station, freight prepaid. You don't pay us anything. We don't ask you to make any deposit. You just take the Cultivator home, and use it a month FREE on your own farm. Give it a good stiff test. Cultivate with it just as if it was your own.

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Our Liberal Proposition

Let us send you a New American Cultivator on trial at our own expense. You needn't even stand the freight. Simply send us a trial order for the New American Cultivator, and we will ship one to your railroad station, freight prepaid. You don't pay us anything. We don't ask you to make any deposit. You just take the Cultivator home, and use it a month FREE on your own farm. Give it a good stiff test. Cultivate with it just as if it was your own.

You Buy from the Makers

We sell our entire output direct to the farmers. Doing business this way keeps us in close touch with the wants of our customers.

If you have new crops of any kind, you will find it hard to do it in any other way. You know where to find us. We know where you are. You get good results, and all your doubts are gone, when you see the machine itself, so that you can find out for yourself about its merits.

The Fruit Market.

With apples and other fruits at high prices there seems to be a good demand for Southern strawberries, and such as I have seen are coming in very good condition. The reports from that section are very favorable for a good crop, but the growers around Boston think the chances are very poor here. The warm weather in January and February and the lack of snow on the vines when the coldest nights came have probably hurt the vines in many places. Tomatoes are coming quite freely from Florida and the prices are coming down rapidly, so that we may indulge in them soon.

The apple crop is the only crop we raise for which there is a direct export demand from the farm.—Solon Chase, Andover, Mass. County, Me.

JAGER
Gasoline Engines
are the best type known. On this great point they differ from all other makes. They don't go on a drive. That means something to the man who is not a mechanic. Simple, safe, easy to run. They are adapted to a multitude of farm jobs. Various sizes and styles; and everything delivered in full working order. The Jager Gasoline Engine has a power. Write for it.
JAS. J. JAGER CO.,
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The large corps of copper-plate engravers and printers maintained by Messrs. Tiffany & Co. in connection with their allied art departments constitutes an unequalled equipment for the production of marriage announcements and other stationery for social use

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Thick Cream

SELLS FOR ONE CENT MORE PER POUND THAN THIN CREAM

The creameries of the country have become so convinced of the increased value of thick cream over thin that many of them are paying one cent per pound more for cream testing 50 per cent. and over than for that testing under 40 per cent.

The reasons for this are—

First—Thick cream makes better butter because it contains less milk and therefore keeps in better condition. Second—Thick cream is so much less in quantity that the cost of transportation is less.

It is much better for the dairymen to make thick cream because he has more skimmings left at home to feed his calves—it then follows that dairymen should buy only such separators as can separate thick cream.

The U.S. Separators

Lead the World in this particular

Because of the cheap and poorly constructed separators that caused much thick cream. They would be expensive even if furnished without cost. VERMONT FARM MACHINE CO., Bellows Falls, Vermont. We are the only manufacturers of separators in the U.S.A.

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